

CLAIMS

Claims 1-15 (cancelled)

Claim 16 (currently amended) A roof structure, comprising:

a first structural roof panel, including opposing spaced apart load bearing plates and a structure for maintaining the plates in spaced apart relation,

a second structural roof panel, including opposing spaced apart load bearing plates and a structure for maintaining the plates in spaced apart relation,

and a third, horizontally extending cross-tie structure panel,

wherein the first and second structural panels are fastened joined together along respectively associated adjacent edges for defining an attic space that is free of a truss structure for supporting the roof panels,

wherein ~~said the~~ third, cross-tie panel is connected between ~~said the~~ first and second structural roof panels, wherein at least one of ~~said the~~ first, second, or third panel includes,

a core, having first and second opposing faces,

a first plate attached to ~~said the~~ first core face,

a second plate attached to ~~said the~~ second core face,

wherein ~~said core includes unifying material~~ at least one of the panels is insulated and at least one of the panels carries a plastic foam.

Claim 17 (currently amended) The [structural panel] roof structure of claim 16, wherein ~~said the~~ first and second structural roof panels are fastened together by way of a wedge member.

Claim 18 (currently amended) The [structural panel] roof structure of claim 17, wherein the ~~said~~ third, cross-tie structure panel is connected between and connected to at least one of ~~said the~~ first and second structural roof panels by way of a wedge member.

Claim 19 (new) The roof structure of claim 16, wherein the third, cross-tie panel is connected between at least one of the first and second structural roof panels by way of a wedge member.

Claim 20 (new) The roof structure of claim 18, wherein the wedge member is triangular.

Claim 21 (new) The roof structure of claim 16, wherein the cross-tie structure is a panel that includes opposing spaced apart plates, at least one of which is load-bearing and a structure for maintaining the plates in spaced apart relation.

Claim 22 (new) The roof structure of claim 21, wherein at least one of the load bearing plates in the first and second structural roof panels, and the cross-tie panel is metal.

Claim 23 (new) The roof structure of claim 17, wherein the wedge member includes a hollow core portion.

Claim 24 (new) The roof structure of claim 17, wherein the wedge member is fabricated from the same type of material used to fabricate at least one of the first or second structural panels.

Claim 25 (new) The roof structure of claim 21, wherein only one of the opposing plates is load bearing in the cross tie panel.

Claim 26 (new) A self-supportive insulated structure for a house, comprising:
a first insulated structural roof panel, including opposing spaced apart load bearing plates and a structure for maintaining the plates of the first structural panel in spaced apart relation,

a second insulated structural roof panel, including opposing spaced apart load bearing plates and a structure for maintaining the plates of the second structural panel in spaced apart relation,

a third, horizontally extending cross-tie panel, including opposing spaced apart load bearing plates and a structure for maintaining the plates of the third cross-tie panel in spaced apart relation,

wherein the first and second panels are inclined relative to the third panel, and are joined together along respectively associated adjacent edges for defining an attic space that is free of a truss structure for supporting the roof panels,

wherein said third, cross-tie panel is connected between said first and second structural roof panels, and one of the plates of the third cross-tie panel of the attic space defines a floor,

wherein at least the first and second structural roof panels include a metal plate that carries a plastic foam; and

a system for heating and cooling the house located in the attic space.

Claim 27 (new) The roof structure of claim 26, wherein the third, cross-tie panel is connected between the first and second structural roof panels by way of a wedge member.

Claim 28 (new) The roof structure of claim 26, wherein the support structure defines a plurality of tubes.

Claim 29 (new) The roof structure of claim 27, wherein the support structure defines a plurality of tubes.

Claim 30(new) A self-supportive insulated structure for a house, consisting essentially of:

a first insulated roof panel, including opposing spaced apart metal load bearing plates and a support structure for maintaining the plates of the first roof panel in spaced apart relation,

a second insulated roof panel, including opposing spaced apart load bearing plates and a support structure for maintaining the plates of the second roof panel in spaced apart relation,

a third, horizontally extending cross-tie panel, including opposing spaced apart load bearing plates and a support structure for maintaining the plates of the third cross-tie panel in spaced apart relation,

a first wedge;

a second wedge; and

a third wedge;

wherein the first and second panels are inclined relative to the third panel, and are joined together along respectively associated adjacent edges, with the first wedge disposed therebetween, for defining an attic space that is free of a truss structure for supporting the roof panels,

wherein said third, cross-tie panel is connected between said first and second roof panels, the second wedge being disposed along one edge of the cross-tie panel between the first roof panel and the cross-tie panel, and the third wedge being disposed along another edge of the cross-tie panel between the second roof panel and the cross-tie panel;

wherein one of the load bearing plates of the cross-tie panel defines a floor for the attic space; and

wherein at least the first and second roof panels include a metal plate that carries a plastic foam.

Claim 31 (new) The roof structure of claim 29, wherein all of the load bearing plates are metal.

Claim 32 (new) The roof structure of claim 30, wherein the support structure defines a plurality of tubes.

Claim 33 (new) The roof structure of claim 31, wherein the load bearing plates have a flat exterior surface.

Claim 34 (new) The roof structure of claim 33, wherein the attic space has a heating and cooling system for the house located therein.